

BEST AVAILABLE COPY

Application No.: 10/655,806

Docket No.: JCLA11376

REMARKS**Present Status of the Application**

The Office Action rejected claims 4-6 and 12 under 35 U.S.C. 103(a) as being unpatentable over Bonner et al. (U.S. 6,811,470; hereafter Bonner) in view of Lamphere et al. (U.S. 6,155,910; hereafter Lamphere). Applicants believe that claims 4-6 and 12 are already distinguished over the cited arts. Furthermore, Applicants have added claims 13-16 for further limiting the scope of the present invention. No new matter has been added into the application by the amendment made herein. After entry of the foregoing amendments, claims 4-6 and 12-16 remain pending in the present application, and reconsideration of those claims is respectfully requested.

Discussion of the Office Action Rejections

The Office Action rejected claims 4-6 and 12 under 35 U.S.C. 103(a) as being unpatentable over Bonner et al. (U.S. 6,811,470; hereafter Bonner) in view of Lamphere et al. (U.S. 6,155,910; hereafter Lamphere).

Applicants respectfully traverse this rejection. In the present invention, a first polishing operation is performed by using a first abrasive polishing pad 204 (Fig. 2A of the present invention), wherein the top surface of the first abrasive polishing pad can be flat. That is, the first polishing operation is a slurry-free polishing process with the use of the abrasive polishing pad. After the first polishing operation, a second polishing operation is conducted at a rate faster

BEST AVAILABLE COPY

Application No.: 10/655,806

Docket No.: JCLA11376

than that of the first polishing operation, wherein the second polishing operation is performed with the use of a second abrasive polishing pad with a roughness top surface. That is, the second polishing operation is a slurry-free polishing process as well.

However, In the citation, U.S. 6,604,985, Muilenburg et al. silence about the shape of the abrasive composites 210. More specifically, Muilenburg et al. neither teach nor suggest that the shape of the composites 210 includes triangular cone, hexagonal cone or circular cylinder. They never mention that the composite 210 possesses an acute top. Furthermore, in Figs. 11, 12 and 13, the top of the composite 210 is flat and dose not possess an acute top point.

Moreover, Bonner fails to teach or suggest that the polishing operation is performed without using a slurry. Instead, Bonner emphasizes that the low selectivity polishing step he discloses is achieved by using a composition of SS-12 with a slurry delivery rate of about 200ml/min (col. 10, lines 7-13). Additionally, Bonner also emphasizes that "at the second polishing step, a composition having a ratio of about 1:11:8 of HS-8005.....with a slurry delivery rate of about 200ml/min was supplied to the platen". That is, both polishing steps mentioned by Bonner are the polishing process with the use of slurry. It is well known in the art that the polishing process with the use of abrasive polishing pad is a slurry-free polishing process. It is also well known in the art that the polishing mechanism of the polishing process with the use of the abrasive polishing pad is different from that of the polishing process with the use of slurry.

Besides, Bonner also fails to teach or suggest that the rate of the second polishing operation is faster that of the first polishing operation. Instead, Bonner emphasizes that the platen rotational speed and the carrier head rotational speed in the first polishing operation is

BEST AVAILABLE COPY

Application No.: 10/655,806

Docket No.: JCLA11376

equal to those in the second polishing operation (col. 9, line 66- col. 10, line 1 and col. 12, lines 42-43). Bonner only mentions the individual rotational speed of the platen and the carrier head in both of the first polishing operation and the second polishing operation. Bonner apparently silences about the polishing rate for each of the first polishing operation and the second polishing operation.

Therefore, even if people skill in the art did modify Bonner's disclosure with Lamphere's disclosure, the combination result would not possess the advantage as same as what the present invention provides. Hence, Applicants respectfully assert that claim 4 patentably define over the combination of Bonner and Lamphere. Claims 5-6 and 12, which depend from claim 4, are also patentable over Bonner in view of Lamphere, at least because of their dependency from an allowable base claim. Applicants respectfully assert that these claims are in condition for allowance. Thus, reconsideration and withdrawal of this rejection are respectively requested.

Newly Added Claims

Applicant has added claims 13-16 for defining the present invention by introducing that the removal rate at the end of the first polishing operation is slower than the removal rate in the second polishing operation (paragraph [0029] and paragraph [0031] and Fig. 3). It is believed that no new matter is introduced into the application by adding the new set of claims.

As the same reasons discussed above for the rejection 103, Applicant respectfully submits that the combination of cited arts does not render claims 13-16 unpatentable.

BEST AVAILABLE COPY

Application No.: 10/655,806

Docket No.: JCLA11376

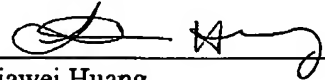
CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 4-6 and 12-16 are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Date: 11/28/2005

4 Venture, Suite 250
Irvine, CA 92618
Tel.: (949) 660-0761
Fax: (949)-660-0809

Respectfully submitted,
J.C. PATENTS



Jiawei Huang
Registration No. 43,330